

4937

Diag. Ckt. No 8502 & 8556-1

4937

Form 504

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

R. S. Patton, Director

C. & G. SURVEY
L. & A.
DEC 16 1929
Acc. No.

State: S. W. Alaska

DESCRIPTIVE REPORT

Topographic } Sheet No. 13 **4937**
Hydrographic }

LOCALITY

Kodiak Island

Spiridon Bay

1929

CHIEF OF PARTY

E. R. Lukens.

DESCRIPTIVE REPORT

HYDROGRAPHIC SHEET NO. 13

Str. SURVEYOR.

R. R. Lukens, Com'd'g.

Scale 1:20,000

AUTHORITY

The work on the sheet was done in accordance with Instructions dated March 14, 1929.

LIMITS

The sheet comprises hydrography from the head of Spiridon Bay to a union with ship work at the mouth of Uyak Bay and to a union with the inshore work on the Zachar Bay and Cape Ugat to Bird Rock sheets.

CONTROL

Control was established by planetable traverse between triangulation stations. There were no appreciable closing errors in the topography. Between stations STOP and CLIFF there was a closing error of 15 meters which was adjusted.

TIDE GAUGE

The standard automatic tide gauge located at Uyak was used in the reduction of the sounding volumes without adjustment.

SURVEY METHODS

The usual survey methods as prescribed in the Hydrographic Manual was used. SURVEYOR'S launch #4 was used for most of the work but the motorsailer was used the last day for drift sounding at the entrance of the bay. Most of the lines were run on ranges when practical and no compass courses were recorded. In developing, ranges were run around a point or an island and the system of lines fanned out to cover the area.

A ten pound hand lead was used up to 12 and 13 fathoms at the end of the lines and up to 16 fathoms at the head of the bay. A twenty-five pound lead was used on the mechanical sounding machine,

DISCREPANCIES

In Lat. $57^{\circ} - 37' + 1310$ meters, Long. $153^{\circ} - 37' + 100$ meters, a sounding of 8 fm (unreduced) was recorded. The sounding should have undoubtedly been 13 fm as both the 8 and 13 fm marks on the the lead line were marked with three leather throngs. The area was sounded thoroughly and no indication of a shoal was found. This discrepancy is plotted on the smooth sheet as 8 fm and noted.

A shoal sounding of $9\frac{1}{2}$ fm (unreduced) was recorded at Lat. $57^{\circ} - 38' + 170$ meters, Long. $153^{\circ} - 39' + 40$ meters. This sounding was probably $14\frac{1}{2}$ fm as both the 9 and 14 fm marks on the lead line were marked with four leather throngs. No lines were run over the area to verify the error. The sounding is plotted on the smooth sheet as $9\frac{1}{2}$ fm and is noted.

At Lat. $57^{\circ} - 40' + 990$ meters, Long. $153^{\circ} - 45' + 300$ meters, a $19\frac{1}{2}$ fm sounding was recorded. Lines were run over this area and no depth was recorded to verify same. The leadsman probably misread the sheave in this case. The sounding is plotted on the smooth sheet as $19\frac{1}{2}$ fm (unreduced) and is noted on the smheet.

The sounding line running between topographic signals HIM and TUT was sounded with hand lead and shows a depth of 14 fm. The next line north was sounded with the mechanical sounding machine and shows a greatest depth of 13 fm. This is due either to a small correction on the sheave which cannot be accounted for or due to the inaccuracy and slope in the lead line at 16 fm. A very competent leadsman was on the ^{lead} and it is not probable that he could have misread the line.

When work was first started in Spiridon Bay the spelling was assumed to be Spiredon and this was later found incorrect. The name is after a Russian Saint of the Greek Orthodox Church. This incorrect spelling was used in the sounding records but is correct on the title pages and elsewhere.

DANGERS

The bay is generally free of dangers to navigation from the mouth to the islands at the center of the bay. A few shoal were found on the north side of the bay.. In this section the bottom is very uneven.

At Lat. $57^{\circ} - 39' + 680$ meters, Long. $153^{\circ} - 53' + 50$ meters, on position ~~1a~~^{2a} (motorsailer) a least depth of $4\frac{1}{2}$ fm was found. About one hour was spent drift sounding over the spot. ✓

At Lat. 57° - 39' + 680 meters, Long. 153° - 53' + 50 meters between position 63t and 64t a least depth of 9½ fm was found. No further development was given this spot and it should be avoided by large vessels.

A rock bare 1½ fm at M.L.L.W. at Lat. 57° - 41' + 1450 meters, Long. 153° - 53' + 30 meters at position 34p.

Lat. 57° - 40' + 1670, Long. 153° - 47' + 350 meters at position 65s a sunken rock covered 1 fm, at M.L.L.W.

A shoal spot of 6fm 4ft^{45'} was found at Lat. 57° - 40' + 1100 meters, Long. 153° - 54' + 820 meters at position 81s. This was developed but no drift soundings were taken.

A rock bare 4½ ft at Lat. 57° - 40' + 00 meters, Long. 153° - 41' + 800 meters.

A rock bare 2ft at M.L.L.W. was found off Stream Point at Lat. 57° - 38' + 1500 meters, Long. 153° - 38' + 965 meters

At Lat. 57° - 37' + 1380 meters, Long. 153° - 36' + 830 meters between position 37b and 38b a shoal spot with a least depth of 2 fm 4 ft was found. This spot was developed and drift soundings were taken.

At Lat. 57° - 38' + 1250 meters, Long. 153° - 40' + 560 meters at position 1c and 2c, a rock bare 4 ft at M.L.L.W. was found. See under CHANNELS for ranges to clear this and the following rock.

A rock bare 5 ft in Lat. 57° - 38' + 1280 meters, Long. 153° - 41' + 80 meters lays between the above rock and Gull Island at positions 1b and 2b.

A shoal spot of 11 fm was found in Lat. 57° - 39' + 520 meters, Long. 153° - 43' + 20 meters at position 45f. This spot was developed but no drift soundings were taken. Large vessels should avoid this locality.

Off Thistle Rock at Lat. 57° - 39' + 610 meters, Long. 153° - 48' + 600 meters at position 87j a rock bare ½ ft at M.L.L.W. was found.

CHANNELS

The channel through the middle of the bay is free of dangers. During the experience of the survey party no large vessels used the bay. The bay is used frequently by small fishing craft during the season. These vessels carry mid-channel course to a point abeam Ditto Island on the starboard hand. This channel to the north of Ditto Island is recommended for large vessels.

There is a navigable channel for small vessels between Bad Island and Ditto Island but it is not recommended. The channel has a least depth of 5 fathoms.

A 14 fathom channel may be had between Gull Island and Bad Island but this channel is not recommended unless the navigator is familiar with the bay. Vessels making this channel should pass Bad Island 365 meters, (400 yards) on the port beam. Then lay the course for the tangent of Stream Point and proceed until the south shore of the bay opens to the left tangent of Narrow Island. If vessels will hold this course they will avoid the two rocks to the east of Gull Island. Narrow Island is a low island averaging about 15 feet in elevation and is quite conspicuous.

The bay to the east of the islands is clear and vessels may proceed without hazard if the will favor the right side.

ANCHORAGES

Anchorages for small vessels in from 6 to 8 fathoms with sand and mud bottom may be had in Weasel Cove. There is excellent protection in this cove as the mountains are high to the west and with somewhat less elevation to the east.

A fair anchorage may be had in Telrod Cove with sand and shell bottom in from 7 to 15 fathoms. A long wide valley lays to the north of the cove and it is believed that a northerly gale would become uncomfortable for vessels anchored here.

COMPARISON WITH PREVIOUS SURVEYS

This is the original hydrographic survey of the locality.

WIRE DRAG GROUNDINGS

No wire drag was executed in the locality.

GEOGRAPHIC NAMES

Names in local use:

OK. Chief Point See Descriptive Report
Topographic Sheet #H-1929.

Names assigned by survey party:

Bird Rock See Descriptive Report
Topographic Sheet # H-1929.

Nest Island " " " "

Hook Point " " " "

OK Thistle Rock " " " "

OK Clover Rock " " " "

Fish Island Named because of its resemblance of a fish.

~~Big Island~~ Named because it is the largest island in the group

ANGUK ISLAND IS THE CHARTED NAME etc.

Gull Island

Named because of the many sea gulls that frequent it during nesting season.

Bad Island

Arbitrary name.

Ditto Island

" "

Stream Point

Named because of the large stream that flows into the cove to the east.

Telrod Cove

Named because the survey located a lost telemeter rod in the cove..The name has no local significance.

Narrow Island

Named because it is situated at the narrowest part of the bay.

Weasel Cove

Named because of the numerous weasels seen on the beach in the cove.

Only the underscored names are accepted.

Chapman 1-29-36.

Respectfully submitted,

John C. Mathisson.
John C. Mathisson, Aid
Hydrographer.

*Approved &
forwarded
R. P. Lukens
Chief of Party.*

LIST OF SIGNALS.

SIGNAL.	LOCATION FROM.	SIGNAL.	LOCATION FROM.
AL.	Topographic Sheet HA.	PAX.	Topographic Sheet.H.
ANT.	" " H.	PET.	" " .HA.
ASK.	" " H.	PIT.	" " .H.
AT.	" " H.	QIL.	" " .HA.
AUX.	TRI:STATION. 1908.	RIL.	" " .H.
BAD.	Topographic Sheet.HA.	RIT.	" " .H.
BEAR.	TRI:STATION. 1929.	RO.	" " .H.
BIG.	" " . 1929.	ROB.	" " .HA.
BIRD ROCK.	" " . 1908.	SET.	" " .H.
BITE.	" " . 1929.	SI.	" " .HA.
BLUFF.	VOL6&7. Sheet.13.	SLOPE.	TRI:STATION. 1929.
BO.	Topographic Sheet.HA.	SO.	Topographic Sheet.H.
BOM.	" " .H.	STOP.	TRI:STATION. 1929.
BOX.	" " .H.	STREAM.	" " . 1929.
CAR.	" " .H.	TAL.	Topographic Sheet.H.
CLIFF.	TRI:STATION. 1929.	TE.	" " .H.
CUT.	Topographic Sheet.HA.	TIM.	" " .H.
DE.	" " .HA.	TIPE.	TRI:STATION. 1929.
DI.	" " .HA.	TRA.	Topographic Sheet.H.
DOT.	" " .H.	TUT.	" " .HA.
ERF.	" " .HA.	UP.	TRI:STATION. 1929.
ELI.	" " .H.	US.	Topographic Sheet.HA.
FUN.	" " .H.	UTE.	" " .H.
GAT.	" " .H.	VAN.	" " .HA.
GET.	" " .H.	VAT.	" " .H.
GOT.	" " .HA.	WAS.	" " .H.
GRE.	TRI:STATION. 1929.	WET.	" " .HA.
GUL.	Topographic Sheet.HA.	WHO.	" " .H.
HIM.	" " .HA.	WYE.	" " .H.
HIT.	" " .H.	YAK.	" " .HA.
IMP.	" " .H.	YAP.	" " .H.
IS.	" " .HA.	YOU.	" " .H.
JAY.	" " .HA.	ZAU.	" " .H.
JO.	" " .HA.	ZU.	" " .HA.
KEY.	" " .HA.		
KIT.	" " .HA.		
LI.	" " .HA.		
LAM.	" " .HA.		
LAST.	TRI:STATION. 1908.		
LET.	Topographic Sheet.H.		
LIL.	" " .HA.		
LIMIT.	TRI:STATION. 1929.		
LIP.	Topographic Sheet.H.		
MON.	" " .HA.		
MOP.	" " .H.		
MY.	" " .HA.		
NIP.	" " .H.		
NO.	" " .H.		
NOT.	" " .HA.		
ODD.	" " .HA.		
ON.	" " .H.		
PAT.	TRI:STATION. 1908.		

Section of Field Records.

ecm

January 27, 1930.

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in
8 volumes of sounding records for

HYDROGRAPHIC SHEET 4937

Locality: Kodiak Island (Spiridon Bay) Alaska

Chief of Party: R. R. Lukens in 1929

Plane of reference is mean lower low water, reading

2.4 ft. on tide staff at Uyak

ft. below B. M.

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

Paul H. Warner

Chief, Division of Tides and Currents.

Section of Field Records
Report on Hydrographic Sheet No. 4937
Spiridon Bay, South West Alaska
Instructions dated March 14, 1929

Chief of Party — R. R. Lukens
Surveyed by — John C. Mathison
Soundings protracted and Plotted by — J. C. M.
Verified and Inked by — J. J. Jarman.

1. The records conform to the requirements of the General Instructions.
2. The field plotting was completed to the extent prescribed by the General Instructions.
3. The plan and character of the development conform to the requirements of the General Instructions.
4. The usual depth curves can be completely drawn.
5. The sounding line crossings are adequate.
6. The junctions with H 4938, H 4941 and H 4948 are satisfactory.

Remarks:

The protracting on this sheet was extremely accurate. Viewing the sheet as a whole, the plotting of soundings was good. However, on inshore lines, where the time interval was very irregular, it was necessary for the office draftsman to respace and replat quite a few of the soundings.

Geographic names of islands and land features were left in pencil as they have not been passed on

Respectfully submitted
J. T. Jarman.

IN REPLY ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO No. 11-WSW

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

August 26, 1930.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4937

Spiridon Bay, Kodiak Island, Alaska.

Surveyed in 1929

Instructions dated March 14, 1929. (Surveyor)

Hand lead and Machine soundings

Chief of Party, R. R. Lukens.

Surveyed by J. C. Mathisson.

Protracted and plotted by J. C. Mathisson.

Verified and inked by J. T. Jarman.

1. The records are well kept and conform to the requirements except that no compass courses were recorded. However the report states that most of the lines were run on ranges.
2. The plan, character and extent of the survey satisfy the general and specific instructions.
3. The sounding line crossings are satisfactory.
4. The information is sufficient for drawing the usual depth curves.
5. The junctions at the entrance to the bay with the following sheets H. 4938, H. 4941 and H. 4948 are satisfactory.
6. The soundings listed as "Discrepancies" in the descriptive report were handled as follows:
 - a. The sounding of 8 fathoms (unreduced) between position 7 c and position 8 c, in Lat. 57° 37' (1310 me), Long. 153° 37' (100 me) was rejected. The officer in charge felt sure the lead line had been mis-read and further investigation showed no indication of a shoaling.
 - b. The sounding of 9½ fathoms (unreduced) just after position 116c, in Lat. 57° 38' (170 me), Long. 153° 39' (40 me) was not rejected but was plotted as recorded. While it is possible that a mistake was made in reading the lead line, the sounding is not far off shore and makes little difference in the curve, therefore the original sounding was retained.

- b. The sounding of $19\frac{1}{2}$ fathoms (unreduced), 18 fathoms 1 foot reduced, between position 73g and position 74g, in Lat. $57^{\circ} 40'$ (990 me), Long. $153^{\circ} 45'$ (300 me) is questioned. While the leadsman may have mis-read the sheave, this area is very broken and the sounding is not far outside the twenty fathom curve. As this sounding had been O. Kéed in the record, when obtained, there is not enough evidence to warrant rejecting it.
- d. The sounding line running between signals Him and Tut is one fathom deeper than the adjoining lines, but this difference is hardly enough to be concerned about and the line was accepted.
7. The usual amount of field plotting was well done by the field party.
8. Character and scope of surveying --- excellent.
- a. There are a few spots which might have been further developed, for example the two $9\frac{1}{2}$ fathom spots and the 10 fathom spot, north of Lat. $57^{\circ} 39'$ in the vicinity of Long. $153^{\circ} 53'$. However the officer in charge has used excellent judgement in laying out this work. The ground has been uniformly covered and in general about the right amount of development has been done.
9. While no additional lead line work is recommended, it will be necessary to drag a large part of the area to give assurance of freedom from shoaler depths.
10. Reviewed by R. L. Johnston, April 9, 1930.

Approved:

A. M. Bohieralski
Chief, Section of Field Records (CHARTS)

J. S. Borden
Chief, Section of Field Work (H. & T.)

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 4937-

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet . 197.0
Number of positions checked . 41.7
Number of positions revised . 12.
Number of soundings recorded . 575.2
Number of soundings revised . 14.2
Number of signals erroneously
plotted or transferred . . None

Date: - - Cebu: - 12 - 1930 - - - - -

Cartographer: - J. Z. Jarman - - - - -

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

C. & G. SURVEY
L. & A.
DEC 16 1929
Acc. No.

REG. NO. 4937

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 13

REGISTER NO. 4937

State South West Alaska

General locality Kodiak Island

Locality Spiridon Bay

Scale 1 : 20,000 Date of survey July - August, 1929

Vessel Launch # 4 Surveyor

Chief of Party R. R. Lukens

Surveyed by John C. Mathisson

Protracted by J. C. M.

Soundings penciled by J. C. M.

Soundings in fathoms feet

Plane of reference M. L. L. W.

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated March 14, 1929

Remarks:

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

AND REFER TO NO.

11-WSW

WASHINGTON

August 26, 1930.

SECTION OF FIELD RECORDS

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1. The records are well kept and conform to the requirements except that no compass courses were recorded. However the report states that most of the lines were run on ranges.
2. The plan, character and extent of the survey satisfy the general and specific instructions.
3. The sounding line crossings are satisfactory.
4. The information is sufficient for drawing the usual depth curves.
5. The junctions at the entrance to the bay with the following sheets H. 4938, H. 4941 and H. 4948 are satisfactory.
6. The soundings listed as "Discrepancies" in the descriptive report were handled as follows:
 - a. The sounding of 8 fathoms (unreduced) between position 7 c and position 8 c, in Lat. 57° 37' (1310 me), Long. 153° 37' (100 me) was rejected. The officer in charge felt sure the lead line had been mis-read and further investigation showed no indication of a shoaling.
 - b. The sounding of 9½ fathoms (unreduced) just after position 116c, in Lat. 57° 38' (170 me), Long. 153° 39' (40 me) was not rejected but was plotted as recorded. While it is possible that a mistake was made in reading the lead line, the sounding is not far off shore and makes little difference in the curve, therefore the original sounding was retained.

b. The sounding of $19\frac{1}{2}$ fathoms (unreduced), 18 fathoms 1 foot reduced, between position 73g and position 74g, in Lat. $57^{\circ} 40'$ (990 ms), Long. $153^{\circ} 45'$ (300 ms) is questioned. While the leadsman may have mis-read the sheave, this area is very broken and the sounding is not far outside the twenty fathom curve. As this sounding had been O. K'ed in the record, when obtained, there is not enough evidence to warrant rejecting it.

d. The sounding line running between signals Him and Tut is one fathom deeper than the adjoining lines, but this difference is hardly enough to be concerned about and the line was accepted.

7. The usual amount of field plotting was well done by the field party.

8. Character and scope of surveying --- excellent.

a. There are a few spots which might have been further developed, for example the two $9\frac{1}{4}$ fathom spots and the 10 fathom spot, north of Lat. $57^{\circ} 39'$ in the vicinity of Long. $153^{\circ} 53'$. However the officer in charge has used excellent judgement in laying out this work. The ground has been uniformly covered and in general about the right amount of development has been done.

9. While no additional lead line work is recommended, it will be necessary to drag a large part of the area to give assurance of freedom from shoaler depths.

10. Reviewed by R. L. Johnston, April 9, 1930.

Approved:

Chief, Section of Field Records (CHARTS)

Chief, Section of Field Work (H. & T.)

STATISTICS FOR HYDROGRAPHIC SHEET # 13.

VOL.	DAY.	STA. MILES SDG. LINES.	NO OF SDGS.	NO OF POSITIONS.	DATE.
1	a.	15.9	551	126	
1.	b.	6.9	155	56	8/2/29.
1.	c.	14.4	286	118	8/3/29.
2.	d.	14.3	338	113	8/5/29.
2.	e.	18.2	372	136	8/6/29.
3.	f.	17.5	345.	125	8/7/29.
3.	g.	21.0	383	143	8/8/29.
4.	h.	20.4	441	169	8/9/29.
4&5.	j.	18.8	405	137	8/12/29.
5.	k.	10.4	213	74	8/13/29.
5.	l.	20.8	370	128	8/14/29.
5&6.	m.	16.3	386	111	8/15/29.
6.	n.	9.3	132	50	8/16/29.
6.	p.	16.3	291	94	8/17/29.
6&7.	q.	17.1	337	126	8/19/29.
7.	r.	5.2	127	49	8/20/29.
7.	s.	15.1	312	135	8/21/29.
8.	t.	16.2	288	112	8/23/29.
8.	a(M.S)	0.5	20	8	8/24/29.
					10/7/29.

TOTALS:-

275.1

5759.

2010.